

**REMARKS**

**I. Introduction**

In response to the pending final Office Action, Applicants have amended claim 1 in order to further clarify the subject matter of the present disclosure. No new matter has been added.

A Request for Continued Examination (RCE) is being filed concurrently with this Amendment.

Applicants appreciate the granting of an interview with the Examiner and her Supervisor on January 29, 2010 during which the 103 rejection of claim 1 was discussed. During the interview the Supervisor and Examiner agreed that the Amendment adding the limitation to claim 1 was supported in the specification and drawings.

Applicants respectfully submit that all pending claims as currently amended are patentable over the cited prior art.

**II. The Rejection Of Claims 1-2 Under 35 U.S.C. § 103**

Claims 1-2 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Narukawa et al. (USP No. 5,508,122). Applicants respectfully submit that Narukawa fails to render the pending claims obvious for at least the following reasons.

With regard to the present disclosure, amended independent claim 1 recites, in part, a secondary battery comprising a positive electrode plate which has, in a vicinity of a first end at an initial winding side, an exposed portion of the positive electrode current collector having the positive electrode material mixture layer not formed thereon, and a positive electrode lead connected to the exposed portion. In addition, the battery has a first winding turn outwardly adjacent to a connecting portion of the positive electrode lead with the separator interposed

therebetween, and a second winding turn outwardly adjacent to the first winding turn with the separator interposed therebetween. Together, the first and second winding turns comprise a portion of the negative electrode plate carrying the negative electrode material mixture layer, and comprise a portion of said positive electrode current collector having said positive electrode material mixture layer not formed thereon.

One feature of claim 1 is that the wound battery has a 1st and 2nd winding turn on which negative electrode material mixture is formed and no positive electrode material mixture layer is not formed. For example, as is shown in Fig. 2 of the present disclosure, the battery winds around a core. The first 23 and second 24 winding turns after the lead 8 have negative electrode material mixture 2b, but no positive electrode material mixture 1b on the respective current collectors.

Another feature of the present disclosure is that the positive electrode lead is connected to an exposed portion of the positive electrode current collector having the positive electrode material mixture layer not formed thereon. As can be seen, the lead 8 is connected to the exposed positive current collector 1a at a connection point 22.

The rationale for the above structure is that the present disclosure aims to prevent breakage of the positive electrode plate due to the ends of positive lead and an internal short circuit due to contact between the electrode plates. When a lithium-containing composite oxide is used as a positive electrode active material and a carbon material is used as a negative electrode active material, the positive electrode is more rigid than the negative electrode. Thus, if the positive electrode material mixture is positioned on the first winding turn outwardly adjacent to the positive lead, the positive electrode material mixture is easily cracked and broken due to the unevenness of the step created by the lead. As such, by having two winding turns of

negative electrode material mixture and no positive electrode material mixture until the third winding turn, the positive electrode material mixture may be cushioned by the negative electrode material mixture, thereby preventing breakage.

Narukawa fails to disclose the structure of the winding turns recited in claim 1 of the present disclosure. As is shown in Fig. 2 of Narukawa, there is no first winding turn adjacent to a connecting portion of the positive electrode 1 and a second winding turn outwardly adjacent to the first that both comprise a portion of the negative electrode material mixture and do not comprise the positive electrode material mixture. Rather, the negative electrode material mixture is not in the first winding turn outwardly adjacent to the separator 3.

Moreover, Narukawa does not disclose an exposed portion of the positive electrode current collector having the positive electrode material mixture layer not formed thereon, and a positive electrode lead connected to the exposed portion. As can be seen, the positive lead 12 is connected to the separator 3. As such, based on Narukawa, one skilled in the art would not derive claim 1 of the present disclosure.

Therefore, as is well known, in order to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. As Narukawa does not disclose a secondary battery comprising a positive electrode plate which has, in a vicinity of a first end at an initial winding side, an exposed portion of the positive electrode current collector having the positive electrode material mixture layer not formed thereon, and a positive electrode lead connected to the exposed portion, and wherein a first winding turn outwardly adjacent to a connecting portion of the positive electrode lead with the separator interposed therebetween, and a second winding turn outwardly adjacent to the first winding turn with the separator interposed therebetween, comprise a portion of the negative electrode plate

carrying the negative electrode material mixture layer, and comprise a portion of said positive electrode current collector having said positive electrode material mixture layer not formed thereon, it is apparent that Narukawa fails to render amended claim 1 or any dependent claims thereon obvious. Accordingly, the Applicants respectfully request that the § 103 rejection be withdrawn.

**III. All Dependent Claims Are Allowable Because The  
Independent Claim From Which They Depend Is Allowable**

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as amended claim 1 is patentable for the reasons set forth above, it is respectfully submitted that all pending dependent claims are also in condition for allowance.

**IV. Conclusion**

Having responded to all open issues set forth in the Office Action, it is respectfully submitted that all claims are in condition for allowance.

**Application No.: 10/594,276**

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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